0069445

SAF-RC-001
Industrial Hygiene Sampling
FINAL DATA

NO DISTRIBUTION REQUIRED

COMMENTS:

SDG 06I-0659-01 SAF-RC-001

Rad only X Chem only Rad & Chem

X Complete Partial

300 Area 303F Bldg

DATA CHEM LABORATORIES

Cover Page

Report Identification Number: 06I-0659-01
Subcontract Number: 0000X-BO-G0058-B-Mod#4
Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby
Laboratory Identification Number: DCHM
SAF#: RC-001 / R300XX J451
Payroll#: 8C278

Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
13 Feb 2006	J114Y0	06I05214	NMAM 7300M	G061H002	MCE
13 Feb 2006	J114Y1	06I05215	NMAM 7300M	G061H002	MCE
13 Feb 2006	J114Y2	06I05216	NMAM 7300M	G061H002	MCE

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Name: Lisa M. Reid
Title: Chemist
Date: February 20, 2006

DataChem Laboratories, Inc.
960 West Levoy Drive
Salt Lake City, Utah 84123-2547

Phone: (801) 266-7700
FAX: (801) 268-9992

Web Page: www.datachem.com
E-mail: lab@datachem.com

Case Narrative Page

Report Identification Number:	06I-0659-01
Subcontract Number:	0000X-BO-G0058-B-Mod#4
Name of Industrial Hygienist:	Denise A. Pitts / Henry W. Ruby
Laboratory Identification Number:	DCHM
SAF#:	RC-001 / R300XX J451
Payroll#:	8C278

General Set Information: There are 4 samples in set 06I-0656-01, 4 samples in set 06I-0657-01, 6 samples in set 06I-0658-01 and 3 samples in set 06I-0659-01 which were analyzed for beryllium, lead and cadmium on MCE filter. No problems were encountered with the receipt of these samples and no contact with the CTR was required.

Method Summary: Samples were transferred to 50 ml centrifuge tubes and digested in the presence of 10 mL of 1:1 (v/v) nitric acid. Samples were digested in a hot block set at 110°C for 40 minutes. Samples were then diluted to a 25 mL volume with ASTM Type II Water. Samples were shaken and delivered for ICP analysis.

Sample Preparation: All samples were prepared in accordance with DCL SOP "IH-AN-021" and NIOSH method NMAM 7300 modified for hot block digestion.

Holding Times: The holding times were met for both sample preparation and analysis.

Instrument Calibration: Instrument calibration was performed in accordance with NIOSH method NMAM 7300.

Initial and Continuing Calibration Verification Analysis: Beryllium, cadmium and lead recoveries in all Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) samples are within the quality control limits of +/- 10%.

Initial and Continuing Calibration Blank Analysis: No beryllium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 0.02 ug/sample. No cadmium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 0.1 ug/sample. No lead results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 0.5 ug/sample.

Method Blank Analysis: No beryllium, cadmium or lead was found in the media blank sample above the Contract Required Detection Limit (CRDL).

Dilution(s): NA.

Case Narrative Page

Laboratory Control Sample and Duplicate Analysis: One Laboratory Control Sample (LCS) and one Laboratory Control Sample Duplicate (LCSD) were prepared and analyzed with the sample batch. The LCS result was within the control limit of +/- 20%. The Relative Percent Differences (RPD) between the LCS and the LCSD was within the control limit of 20%.

Replicate Analysis: Two samples were replicated with this analysis run. The RPD between the sample and the replicate was within the control limit of 20%. If the result of the sample or replicate is below the CRDL, replicate analysis is negligible.

Flagging Codes: None

Nonconformance/Corrective Action Report (NC/CAR): N/A

Sample Calculation: The final results are calculated by the following equation:

Final result for aqueous samples (µg/sample) = (A) x (B) x (C)

Where:

A = Analyte concentration from instrument determination (µg/L)

B = Concentration factor from sample preparation

$$= \frac{\text{Final Volume of Digestate (L)}}{\text{Sample}}$$

C = Dilution performed at time of analysis

Example Calculation: (1 µg/L) x (0.025 L/sample) x (1) = 0.025 µg/sample

Miscellaneous Comments: None.

DataChem Laboratories, Inc.
960 West Levoy Drive
Salt Lake City, Utah 84123-2547

Phone: (801) 266-7700
FAX: (801) 268-9992

Web Page: www.datachem.com
E-mail: lab@datachem.com

DATA CHEM LABORATORIES

Report Page

Report Identification Number: 06I-0659-01
Subcontract Number: 0000X-BO-G0058-B-Mod#4
Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby
Laboratory Identification Number: DCHM
SAF#: RC-001 / R300XX J451
Payroll#: 8C278

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Beryllium µg/sample		Beryllium µg/m³		Air Volume L	
J114Y0	06I05214	16 Feb 2006	<0.02	U	<0.32	U	62.	
J114Y1	06I05215	16 Feb 2006	<0.02	U	**		0.0	
J114Y2	06I05216	16 Feb 2006	<0.02	U	**		0.0	
Limit of Detection (LOD)			0.02					
Required Detection Limit (RDL)								

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Lead µg/sample		Lead µg/m³		Cadmium µg/sample	
J114Y0	06I05214	16 Feb 2006	<0.5	U	<8.1	U	<0.1	U
J114Y1	06I05215	16 Feb 2006	<0.5	U	**		<0.1	U
J114Y2	06I05216	16 Feb 2006	<0.5	U	**		<0.1	U
Limit of Detection (LOD)			0.5				0.1	
Required Detection Limit (RDL)								

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Cadmium µg/m³	
J114Y0	06I05214	16 Feb 2006	<1.6	U
J114Y1	06I05215	16 Feb 2006	**	
J114Y2	06I05216	16 Feb 2006	**	
Limit of Detection (LOD)				
Required Detection Limit (RDL)				

U - Parameter not detected above LOD.
J - Parameter between LOD and RDL.

QC Summary Page

Report Identification Number: 06I-0659-01
Subcontract Number: 0000X-BO-G0058-B-Mod#4
Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby
Laboratory Identification Number: DCHM
SAF: RC-001 / R300XX J451
Payroll#: 8C278

Batch ID: G061H002

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
BL-241345-1	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
BL-241345-1	MB	Lead	µg/sample	ND	NA	NA	NA	NA
BL-241345-1	MB	Cadmium	µg/sample	ND	NA	NA	NA	NA
QC-241345-1	LCS	Beryllium	µg/sample	11.3	NA	10.0	113.	NA
QC-241345-1	LCS	Lead	µg/sample	108.	NA	100.	108.	NA
QC-241345-1	LCS	Cadmium	µg/sample	33.8	NA	30.0	113.	NA
QD-241345-1	LCSD	Beryllium	µg/sample	11.0	11.3	10.0	110.	2.96
QD-241345-1	LCSD	Lead	µg/sample	106.	108.	100.	106.	2.23
QD-241345-1	LCSD	Cadmium	µg/sample	33.2	33.8	30.0	111.	1.71

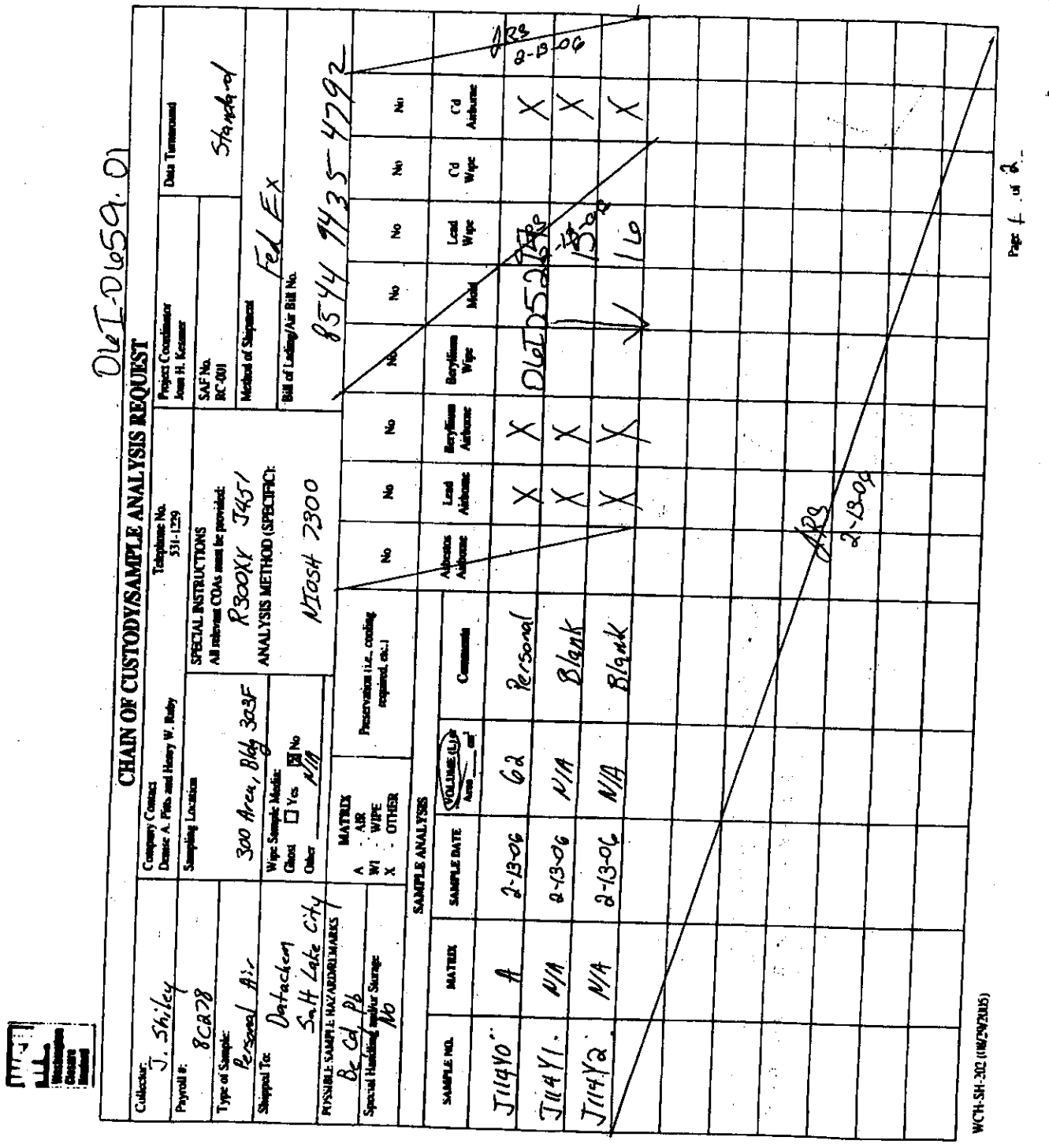
MB - Method Blank
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MSD - Matrix Spike Duplicate
LD - Laboratory Duplicate

NA - Not Applicable
ND - Parameter not detected above LOD

LCS, LCSD Percent Rec. = (Result / Target) * 100.0
MS, MSD Percent Rec. = ((Result – Parent) / Target) * 100.0

LCS, LCSD Relative Percent Diff. = ((|LCS – LCSD|) / ((LCS + LCSD)/2.0)) * 100.
MS, MSD Relative Percent Diff. = ((|MS – MSD|) / ((MS+ MSD)/2.0)) * 100.
LD Relative Percent Diff. = ((|Parent – LD|) / ((Parent + LD)/2.0)) * 100

COC Page



CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

OLET-D0659.01

Collector: J. Shirley
Company Contact: Denise A. Pitts and Henry W. Ruby
Telephone No.: 531-1229
Project Coordinator: Joan H. Kramer
Data Turnaround: Standard
Payroll #: 8CA78
Sampling Location: 300 Area, Bldg 303F
SAF No.: RC-001
Method of Shipment: FedEx
Type of Sample: Personal Air
Wipe Sample Media: Chest ☐ Yes ☒ No; Other N/A
SPECIAL INSTRUCTIONS: All relevant COAs must be provided: R300XK 7451
ANALYSIS METHOD (SPECIFIC): NIOSH 7300
Bill of Lading/Air Bill No.: 8544 9435 4792
Shipped To: Datachem Salt Lake City
POSSIBLE SAMPLE HAZARDS/REMARKS: Be, Cd, Pb
Special Handling and/or Storage: No
MATRIX: A - AIR; WI - WIPE; X - OTHER
Preservation (i.e., cooling required, etc.): No

SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L) Area ___ cm²	Comments	Asbestos Airborne: No	Lead Airborne: No	Beryllium Airborne: No	Beryllium Wipe: No	Mold: No	Lead Wipe: No	Cd Wipe: No	Cd Airborne: No
J1149 0	A	2-13-06	62	Personal		X	X	OLET05246				X
J1149 1	N/A	2-13-06	N/A	Blank		X	X					X
J1149 2	N/A	2-13-06	N/A	Blank		X	X					X

JR3 2-13-06

JR3 2-13-06

8544 9435 4792

Page 1 of 2

WCH-SH-202 (11/29/2005)

DataChem Laboratories, Inc.
960 West Levoy Drive
Salt Lake City, Utah 84123-2547

Phone: (801) 266-7700
FAX: (801) 268-9992

Web Page: www.datachem.com
E-mail: lab@datachem.com

Enter on line below the first Sample Number from Page One:

JI14Y0

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

SIGN / PRINT NAMES / USE MILITARY TIME

Relinquished By/Signed	DATE/TIME	Received By/Signed	DATE/TIME
James Shiley [signature]	8-13-06 / 1530	Locked Cabinet, Room 16, Bldg 3746	8-13-06 / 1530
Locked cabinet 3746 bldg / Rm #16 [signature] Goldie Mathan	02-14-06 / 1430	RZ Steffler [signature]	2-14-06 / 1430
RZ Steffler [signature]	WC# 2-14-06 / 1600	Fed Ex	
Fed Ex	2-15-06 1030	[signature]	2-15-06 1030
[signature] Met 3	2-15-06 1030		

LABORATORY SECTION	Received By	Title	DATE / TIME

REVIEWED BY: [signature] PRINT/SIGN NAME DATE: 2-15-06

WCH-SH-202 (08/29/2005)

Page 2 of 2

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: T. Shiley	Company Contact: Denise A. Pitts and Henry W. Ruby	Telephone No.: 531-1229	Project Coordinator: Joan H. Kessner	Data Turnaround: Standard
Payroll #: 8C278	Sampling Location: 300 Area, Bldg 303F	SPECIAL INSTRUCTIONS All relevant COAs must be provided: R300XX J451	SAF No.: RC-001	
Type of Sample: Personal Air		ANALYSIS METHOD (SPECIFIC): NIOSH 7300	Method of Shipment: Fed Ex	
Shipped To: Datachem Salt Lake City	Wipe Sample Media: Ghost ☐ Yes ☒ No Other N/A		Bill of Lading/Air Bill No.: 8544 9435 4792	
POSSIBLE SAMPLE HAZARD/REMARKS: Be, Cd, Pb	MATRIX: A - AIR; WI - WIPE; X - OTHER	Preservation (i.e., cooling required, etc.):		
Special Handling and/or Storage: No				

SAMPLE ANALYSIS

SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L) or Area ____ cm²	Comments	Asbestos Airborne	Lead Airborne	Beryllium Airborne	Beryllium Wipe	Mold	Lead Wipe	Cd Wipe	Cd Airborne	
					No	No	No	No	No	No	No	No	
J114Y0	A	2-13-06	62	Personal		X	X					X	AR3 2-13-06
J114Y1	N/A	2-13-06	N/A	Blank		X	X					X	
J114Y2	N/A	2-13-06	N/A	Blank		X	X					X	
					AR3 2-13-06								

AR3 2-13-06

COPY

FIELD SAMPLE COPY

Enter on line below the first Sample Number from Page One:

JI14Y0

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

SIGN / PRINT NAMES / USE MILITARY TIME

Relinquished By/Stored	DATE / TIME	Received By/Stored	DATE / TIME
James Shiley James Shiley	2-13-06 / 1530	Locked Cabinet, Room 16, Bldg 3746	2-13-06 / 1530
Locked cabinet 3746 Bldg / Rm #16			
Goldie Molina Goldie Molina	02-14-06 / 1430	RZ Steffler R.J. Steffler	2-14-06 / 1430
RZ Steffler R.J. Steffler WCH	2-14-06 / 1600	Fed Ex	

LABORATORY SECTION	Received By	Title	DATE / TIME

REVIEWED BY: _____ DATE: _____

PRINT/SIGN NAME